

a' 1 3. An integrated flywheel operated battery and motor in a
2 flywheel battery electric vehicle capable of operating under charge
3 conditions when connected to a source of electrical power or when
4 descending a hill and under load conditions when the vehicle
5 requires motive power comprising:

6 a horizontally disposed cylindrical housing having an inverted
7 conical base and a removable disc-shaped cover;

8 a horizontally disposed flywheel disposed in said housing
9 mounted for rotation with said rotatable axle;

10 a circular battery located about the periphery of said
11 flywheel;

12 said circular battery having a casing having an inner vertical
13 wall and an outer vertical wall;

14 a plurality of electromagnetic rotor coils mounted at spaced
15 intervals along said inner wall and said outer wall;

16 said cylindrical housing having an axially disposed bearing
17 within said cover for receiving said rotatable axle;

18 said housing conical base defining an aperture through the
19 center thereof through which said axle projects;

20 said housing having an outer cylindrical wall having an inner
21 side;

22 a first plurality of electromagnetic field coils mounted and
23 equally spaced around the circumference of said outer wall inner
24 side;

25 said housing cover having a depending cylindrical wall
disposed coaxially immediately inside said battery casing wall and

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cont.*

27 having a second plurality of electromagnetic field coils mounted
28 and equally spaced along an outer side of said depending wall;
29 a plurality of secondary electrical brush locations along said
30 axle, each corresponding to an individual said rotor winding, and
31 means within said axle for conducting electricity from each of said
32 plurality of brush locations to said individual rotor windings;
33 a pair of primary electrical brush locations along said axle
34 electrically connected to corresponding positive and negative poles
35 of said battery;
36 means for constant electrically connecting said individual
37 field coils with a source of electrical power under charge
38 conditions; and
39 means for selective intermittent electrical connection of said
40 individual field coils with a source of electrical power under
41 motor drive conditions;
42 whereby, when under a condition of load, a computer directs a
43 constant flow of electricity from said battery through said primary
44 brush locations to a selected number of said rotor windings through
45 said rotor-coil brush locations, and an intermittent flow of
46 electricity to said field windings to act as a drive motor, and
47 whereby under a condition of charging said computer directs a
48 constant flow of electricity to said rotor windings, and said
49 computer receives a constant flow of electricity from said field
50 coils, which is conducted to said battery through one of said
51 primary brush locations for charging under charge conditions.

A' Cont.

1 4. The flywheel battery and motor of claim 3, further
2 comprising a circular contact track located immediately inside the
3 base of said inner vertical wall and a plurality of pairs of
4 electrical contacts spaced along said track, each said pair being
5 electrically connected with each said first plurality of
6 electromagnetic field coils.

1 5. The flywheel battery and motor of claim 4, said flywheel
2 further comprising a plurality of spaced pairs of rolling bearing
3 contacts located along the underside of said flywheel and so
4 configured that as said flywheel turns said rotor bearing contact
5 pairs periodically form an electrical connection with said
6 electrical contact pairs spaced along said track such that
7 electrical pulses are provided to said plurality of electromagnetic
8 field coils.

1 6. The flywheel battery and motor of claim 5, wherein said
2 plurality of spaced pairs of rolling bearing contacts support said
3 flywheel and battery.

1 7. The flywheel battery and motor of claim 6, said disc
2 shaped cover having circular stabilizing track on its underside
3 near the perimeter of said disc-shaped cover.

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1 8. The flywheel battery and motor of claim 7, said flywheel
2 further comprising a plurality of spaced rolling stabilizer
3 bearings located along the upper side of said circular battery near
4 its outer periphery so as to roll against said circular stabilizing
5 track.

1 9. The flywheel battery and motor of claim 3, wherein said
2 axially disposed axle bearing of said cover extends upward from
3 said cover and said cover further comprises a plurality of radially
4 spaced triangular supports extending from said axle bearing to the
5 outer periphery of said cover.

1 10. The flywheel battery and motor of claim 9, wherein said
2 axle bearing extends axially downward from said cover and said
3 cover comprises a plurality of radially spaced triangular supports
4 extending from said axle supports to the under side of said cover
5 at points so as to clear said circular battery when said motor is
6 assembled.

1 11. The flywheel battery and motor of claim 3, wherein said
2 flywheel comprises a circular outer ring so sized and configured as
3 to support said circular battery, and an inverted, generally
4 conical ring support leading from said circular outer ring
5 downwardly and inwardly for attachment to said rotatable axle.

Amt.

1 12. The flywheel battery and motor of claim 11, wherein said
2 ring support comprises a plurality of generally triangular ring
3 support members, each set at an angle so as to leave a space
4 therebetween so as to form a fan for moving cooling air upward
5 through said motor.

1 13. The flywheel battery and motor of claim 12, wherein said
2 flywheel ring support further comprises concentric inner and outer
3 walls for housing and supporting said circular battery and a
4 removable ring-shaped cover attached to said inner wall and said
5 outer wall for completely housing said battery.

1 14. The flywheel battery and motor of claim 13, wherein the
2 positive and negative plates of said battery form concentric
3 circles.

1 15. The flywheel battery and motor of claim 14, wherein said
2 positive and negative plates are copper-lead composition and the
3 electrolyte is a starved electrolyte paste.

1 16. The flywheel battery and motor of claim 15, wherein said
2 circular battery is divided into four semicircular batteries, each
3 said semicircular battery having a positive pole and a negative
4 pole for receiving and sending electrical power to said pair of
5 primary brush locations on said rotatable axle.

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1 17. The flywheel battery and motor of claim 16, wherein each
2 said battery has a mounting notch so configured as to conform with
3 an upright attached to said flywheel ring and extending vertically
4 toward said battery cover.

1 18. The flywheel battery and motor of claim 17, wherein said
2 positive and said negative poles of each said battery are located
3 for electrical attachment with an upright within each said
4 corresponding notches.

1 19. The flywheel battery and motor of claim 3, further
2 comprising mounts spaced around said outer wall of said housing for
3 mounting said flywheel battery and motor to said vehicle.

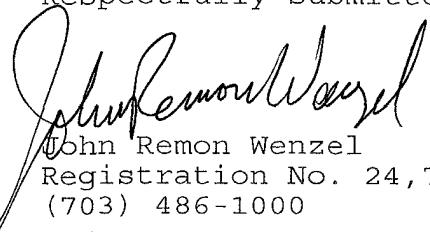
1 20. The flywheel battery and motor of claim 3, wherein said
2 housing is made of an appropriate plastic.

1 21. The flywheel battery and motor of claim 7, wherein said
2 contact track and said stabilizing track are made of TEFLON.

1 22. The flywheel battery and motor of claim 11, wherein each
2 said disc-shaped cover and said conical base define apertures
3 therethrough for promoting the flow of cooling air through said
4 housing.

The amendment is entered to more fully claim the Applicant's invention. No new matter is entered. Formal examination on the merits of the application is now respectfully requested.

Respectfully submitted,



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